REMARKS

I. Summary

Claims 1-17 are pending in the application. In the Final Office Action mailed on May 5, 2005, claims 1-17 were rejected. Claims 1, 5, and 6 have been amended. The issues in the Final Office Action are:

- The specification is objected to.
- Claims 1, 5, and 6 are objected to.
- Claims 1, 4, and 12 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Wu et al.* (U.S. Patent No. 5,906,001, hereinafter *Wu*).
- Claims 1-17 are rejected under the judicially-created doctrine of double patenting over claims 1-10 of *Brewer* (U.S. Patent No. 6,668,314, hereinafter *Brewer* '314).
- Claims 6-11 and 15-17 are rejected under the judicially-created doctrine of double patenting over claims 12-16 of *Brewer* (U.S. Patent No. 5,966,733, hereinafter *Brewer* '733).

II. Objections to the Specification

The title of the specification is objected to. Applicant has amended the title as suggested by the Examiner on page 2 of the Final Office Action. Applicant respectfully requests that the Examiner withdraw the objection to the specification.

III. Objections to the Claims

Claims 1, 5, and 6 have been objected to. Each of claims 1, 5, and 6 have been amended as suggested by the Examiner. Support for these amendments is found at, for example, page 41, lines 10-15 of the specification. Thus, no new matter has been added.

Applicant respectfully traverses the Examiner's assertions on page 3 of the Office Action regarding "virtual memory." Applicant respectfully believes that the Examiner's

assertions are moot in view of the claim amendments.

Applicant appreciates the Examiner's withdrawal of the objection to claims 2 and 5 made in the previous Office Action. Applicant respectfully traverses the Examiner's statement regarding the scope of the status information made in item 5 on page 4 of the Office Action.

IV. Claim Rejections under 35 U.S.C. § 102(e)

Claims 1, 4, and 12 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Wu*. The prior arguments submitted in response to the December 15, 2004 Office Action are still applicable to the above rejection and are incorporated herein. However, for the sake of brevity, those arguments will not be repeated herein. Applicant respectfully requests that the Examiner reconsider Applicant's previous arguments, with respect to *Wu* not teaching all elements of claims 1, 4, and 12, together with the additional arguments set forth below.

To anticipate a claim under 35 U.S.C. § 102, a reference must teach every element of the claim. *See* M.P.E.P. § 2131. *Wu* does not teach "monitoring, as a hardware operation, for an occurrence of a translation lookaside buffer (TLB) purge during setup and execution of a data movement operation from virtual memory" as required in claim 1. The cited portion of *Wu* teaches methods of maintaining coherency among several caches; wowever, these methods do not teach monitoring, as a hardware operation, for an occurrence of a TLB purge during setup and execution of a data movement operation from virtual memory.

Claims 4 and 12 depend directly from claim 1. As such, they comprise all limitations of the base claim from which they depend. As shown above, *Wu* does not teach all limitations of claim 1. Accordingly, *Wu* does not teach all limitations of claims 4 and 12 and, therefore, *Wu* does not anticipate claims 1, 4, and 12.

Applicant traverses the Examiner's response to Applicant's arguments regarding the December 15, 2004 Office Action. The Examiner states "Applicant argues that Wu et al. teaches such monitoring as a software-based operation." *See* Final Office Action, page 7. The Examiner further "assumes that applicant is trying to say that Wu et al. teaches such monitoring as a software-based operation while the present invention describes it as a hardware-based operation...." As the Examiner admits, *Wu* teaches an operation

implemented using software and hardware. *See* Final Office Action, page 8. However, *Wu* does not teach monitoring as a strictly hardware operation as required by claim 1. Thus, *Wu* does not teach all limitations of claim 1.

The Examiner states on page 8 that "applicant's operations are not *entirely* or *exclusively* hardware based..." and provides citations to page 1, 11, and 18 of the specification in support. Regarding the citation on page 1 of the specification, which recites "[t]he invention is operable in an environment in which data movement is performed largely by hardware rather than software...," Applicant respectfully asserts that one of ordinary skill in the art would understand that certain embodiments of the invention operate in environments in which data movement is performed largely by hardware and/or environments in which data movement is provided entirely by hardware, especially when considered in view of the numerous examples of embodiments of the present invention "enabled in hardware rather than software". *See* page 13, lines 7-14. *See also* page 10, lines 1-5 (performing operations integral to data movement with hardware rather than software); page 52, lines 1-5 (optimizing aspects of data movement operations by performing functions on hardware rather than software).

Regarding the citation on page 11, Applicant respectfully asserts that the Examiner has paraphrased this part of the specification. Applicant respectfully points out that the paraphrased text, when taken in context, refers to an embodiment illustrated in Figure 1 of the application, not all embodiments. In the same paragraph from which the Examiner's paraphrased citation was taken, the specification recites that "...these phases or aspects are enabled by hardware under the invention." *See* page 11, lines 8-14.

The Examiner again paraphrases material on page 18 of the specification that is directed to a particular embodiment of the present invention. *See* Final Office Action, page 8. Again, taken in its entirety, Applicant respectfully asserts that the application clearly supports the claim element recited by claims 1, 4, and 12 of "monitoring, as a hardware operation, for an occurrence of a translation lookaside buffer (TLB) purge during setup and execution of a data movement operation from virtual memory."

Applicant respectfully asserts that despite the Examiner's arguments to the contrary, *Wu* does not teach all limitations of claims 1, 4, and 12, and thus does not anticipate these

claims. Applicant respectfully requests that the Examiner withdraw the pending rejection and pass these claims to issue.

V. Double Patenting Claim Rejections

Claims 1-17 are rejected under the judicially-created doctrine of double patenting over claims 1-10 of *Brewer* '314. Claims 6-11 and 15-17 are rejected under the judicially-created doctrine of double patenting over claims 12-16 of *Brewer* '733. Applicant again proposes filing a terminal disclaimer in compliance with 37 C.F.R. § 1.321(b) if the Examiner's rejection still properly stands after an indication of allowability over prior art of record in the present case.

VI. Conclusion

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-2025, under Order No. 10970696-3 from which the undersigned is authorized to draw.

Dated: July 5, 2005

Respectfully submitted,

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV482710359US, in an envelope addressed to: MS AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: July 5, 2005

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